

U.S. GEOLOGICAL SURVEY  
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# ECONOMIC GEOLOGY

CALIFORNIA  
(SAN LUIS OBISPO CO.)  
SAN LUIS QUADRANGLE

## LEGEND

**SURFICIAL ROCKS**  
(Areas of surficial rocks are shown by patterns of dots and circles.)

- Recent
  - Pal Alluvium and stream gravel
  - Pr Terrace deposits and dune sand

**SEDIMENTARY ROCKS**  
(Areas of sedimentary rocks are shown by patterns of parallel lines.)

- Pleistocene
  - Npr Paso Robles formation (conglomerate and sandy and shaly clay of fresh-water origin.)
- UNCONFORMITY
- Miocene (San Pablo)
  - Np Pismo formation (sandstone and cherty diatomaceous ooze shale)
  - Nsm Santa Margarita formation (soft sandstone and conglomerate, with beds of diatomaceous earth and volcanic ash)

**UNCONFORMITY**

- Miocene
  - Nm Monterey shale (clay shale, limonite, and siliceous and bituminous chertaceous shales)
  - Nv Vaquero sandstone (sandstone and conglomerate)

**UNCONFORMITY**

- Chico
  - Kat Atascadero formation (sandstone with some conglomerate and shale)

**UNCONFORMITY**

- Knorrville
  - Kt Tono formation (dark shale and thin-bedded sandstone)

**UNCONFORMITY**

- Jurassic (Franciscan)
  - Jsl San Luis formation (sandstone, conglomerate, and contact metamorphic calcareous shales)
  - Jsl Jasper lentils in San Luis formation (variegated, jasper and chert composed largely of radiolarian remains)

**IGNEOUS ROCKS**  
(Areas of igneous rocks are shown by patterns of triangles and rhombs.)

- Miocene (Pre-San Pablo)
  - Nt Andite-teschelite (intrusive sheets and dikes)
  - Nd Olivine-diabase (dikes and sheets)
  - Nqb Quartz-basalt and rhyolite (dikes and sheets)
  - Nrt Rhyolite tuff (interstratified with the Monterey shale)
  - Npa Pyroxene-andesite (dikes)

**NEOGENE**

- Pre-Chico
  - Ks Serpentine and associated basic rocks (intrusive masses and dikes of serpentine, hornblende, hornblende, and gabbro)
  - Kc Cuesta diabase (intrusive masses and sheets)
  - Ka Andesite-trachyte (volcanic rocks and intrusive masses)
  - Kd Dacite-granophyre (volcanic rocks, intrusive masses, and dikes)

**CRETACEOUS**

- Recent
  - Pal Alluvium and stream gravel
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**LEGEND**

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## LEGEND

**IGNEOUS ROCKS**  
(continued)

- Jo Osos basalt (surface flows)
- Jd Diabase and other basic rocks (intrusive diabase, olivine-diabase, basalt, pyroxene, and peridotite)

**JURASSIC?**

- Jr Granite (plutonic basement rocks)

**PRE-JURASSIC?**

Faults are not clearly defined in the field and therefore are not shown on the map.

M Mines and quarries (bituminous rock, chrome iron, and building stone)

ms Mineral springs

Sections

Known productive formations

Bituminous rocks (soft porous sandstone of the Pismo and Santa Margarita formations are impregnated with bitumen from the underlying Monterey shale.)

Chrome-iron (serpentine contains scattered deposits of chrome-iron ore)

Hematite (bed of iron ore in San Luis formation)

Parrot deposits (beds of rhyolite tuff and Santa Margarita formation)

Infusorial earth (deposits in Monterey, Pismo, and Santa Margarita formations)

Building stone (sandstone, diorite, granite, and andesite, suitable for building purposes)

Road material (loam)



Henry Gannett, Chief Topographer.  
R. U. Goode, Geographer in charge.  
Triangulation by U.S. Coast and Geodetic Survey.  
Topography by L. C. Fletcher and U.S. Coast and Geodetic Survey.  
Surveyed in 1895.

THREE FOOTER  
PROTECTIVE COATING

Scale 1:25,000  
Miles  
Kilometers  
Contour interval 100 feet.  
Datum is mean sea level.  
Edition of Aug. 1903.

DIAGRAM OF TOWNSHIP

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Geology by Harold W. Fairbanks.  
Surveyed in 1897, 98, and 99.

Legend is continued on the left margin.